PROCEEDINGS OF THE

ROYAL ENTOMOLOGICAL SOCIETY

OF LONDON

SERIES C. JOURNAL OF MEETINGS

VOLUME 15. No. 5, 1950.

ORDINARY MEETING

WEDNESDAY, 7TH JUNE, 1950, at 5.30 p.m.

AGENDA

1. Confirmation of the Proceedings of the Ordinary Meeting held on 3rd May, 1950.

2. Recommendations of candidates for Fellowship.

3. Announcement of election of new Fellows.

4. Additions to the Library.

Presented.

Edgell, George Harold. *The bee hunter.* Sm. 8vo. Cambridge, Mass. 1949. [The Publishers.]
Pettey, F. W. *The biological control of prickly pears in South Africa.* 8vo. Pretoria. 1950. [*S. Afr. Sci. Bull.*, **271**.] [Mr. J. Sneyd Taylor.]
Urquhart, F. A. *Introducing the insect.* 8vo. Toronto. 1949. [The Publishers.]

Purchased.

Chapin, James P. *Birds of the Belgian Congo.* Pt. 1. 8vo. New York. 1932. [*Bull. Amer. Mus. nat. Hist.*, **65**.]
Sarlet, L. *Les géométrides à femelles aptères.* 8vo. Verviers. 1948.
Verity, R. *Le farfalle diurne d'Italia.* Vol. 3 (Plates—Papilionidae e Pieridae). Vol. 4. Divisione Papilionida sezione Libytheina, Danaina e Nymphalina. Introduzione. fol. Firenze. 1950.

In addition, separates were presented by Professor J. Omer-Cooper, Companhia de Diamentes de Angola, The Smithsonian Institution, The Director, West African Cacao Research Institute, Dr. R. S. Bagnall, M. E. Janmoulle, United States Department of Agriculture, Mr. D. S. Kettle, Sr. F. Lane, Mr. M. Niblett, Dr. K. G. Blair, Laboratorio di Entomologia Agraria di Portici, Mr. H. M. Hallett, Mr. H. M. Morris, The University of Texas, and Dr. E. A. Cockayne.

5. Admission of Fellows.

6. Exhibits.

Fellows are particularly requested to bring suitable exhibits to the Meeting even though it may not be possible to announce their intention to do so beforehand.

Note.—To avoid congestion in the Library and to enable exhibits to be displayed to greater advantage, a table has been placed in the meeting-room for this purpose. Fellows are asked to place their exhibits on this table, with a suitable explanatory note, as soon as possible on the afternoon of the meeting, so that they are available for inspection there before the meeting opens.

7. Communications.

1. **Professor P. A. Buxton, C.M.G., F.R.S.**

Three films of entomological interest taken in Africa.

[Abstract]

(1) A film taken in many parts of Africa and at different seasons of the year, showing haunts of tsetse flies (*Glossina*) in relation to types of vegetation and so forth ; methods of studying tsetse, e.g. by the use of bait cattle ; methods of modifying vegetation by burning or by withholding annual fires. The control of tsetse and reclamation of land for man and cattle ; discriminative clearing ; roadside clearings ; fences intended to reduce movement of game ; carriage of tsetse by cars and lorries. Successful results of reclamation as shown by presence of cattle in several areas which were formerly occupied by tsetse.

(2) The problem of *Simulium damnosum* and *Onchocerca* infection. Breeding places of this " black fly " ; various entomological studies on it ; fishermen much exposed to bites and infection ; blindness due to *Onchocerca*.

(3) A film showing butterflies feeding on flowers and on wet mud ; various birds and other topics of natural history.

2. **Mr. F. Wilson.**

The entomological control of weeds.

[Abstract]

The results so far obtained in the control of weeds by insects (especially in Australia) will be discussed, as well as the general principles or working hypotheses on which such work in Australia is now based.

Tea will be served in the Library before the meeting.

A card index of Fellows' addresses arranged **on a geographical basis** is now available for the use of Fellows in the Society's Rooms. Addresses in Great Britain are grouped under counties ; elsewhere under Dominions, Colonies, Foreign States, etc.

ADMISSION OF FELLOWS

Any Fellow who has not been formally admitted to the Society under Chapter XIV, Section 4 of the Bye-laws and attends the meeting on 7th June, 1950, is requested to inform the Secretary before 5.15 p.m. on that date.

Proceedings of the Ordinary Meeting held on 3rd May, 1950.

Dr. V. B. Wigglesworth, F.R.S., President, in the Chair.

Present, 89 Fellows and 31 Visitors.

The Minutes of the Ordinary Meeting held on 5th April, 1950, were confirmed and signed by the President.

The President extended a welcome to Professor John Lane, of Sao Paulo, Brazil, and to Professor H. C. Senn, of Bihar, India.

The names of the following candidates for election were read for the first time: H. G. Allcard, Shri J. C. B. Choudhuri, M.Sc., Professor John Lane, and W. Peters, M.B., B.Sc., M.R.C.S., L.R.C.P.

For the second time (taken as read): Miss Belinda Kemp, Dr. Alois Malac, J. Y. Moggridge, J. A. Parry, Abdul Haq Qureshi, B.Sc., I. H. Welsh, J.P., E. C. Zimmerman.

The Secretary read the names of the following newly-elected Fellows of the Society: F. O. Albrecht, c/o International Red Locust Control Service, Abercorn, N. Rhodesia; J. A. Campbell, B.A., Ph.D., M.R.C.V.S., 11, George Square, Edinburgh, 8; C. W. Coombs, 68, Derby Drive, Warrington, Lancs; J. G. Franclemont, Division of Insects, United States National Museum, Washington 25, D.C., U.S.A.; M. T. Gillies, B.A., M.B., B.Ch., Yew Bank, Church Oakley, Basingstoke, Hants; G. P. Holland, Systematic Unit, Division of Entomology (Science Service), Department of Agriculture, Ottawa, Canada; D. K. Kevan, F.A.C.L.A., F.R.S.E., 9, Cluny Drive, Edinburgh, 10; Prof. M. S. Mani, M.A. D.Sc., F.Z.S., F.Z.S.I., St. John's College, Agra, India; R. J. Norton, B.S., M.S., 28, Academy Street, Fitchburg, Mass., U.S.A.; C. F. Rivers, Heatherbank, 250, Shepherds Lane, Dartford, Kent; G. H. Sewell, F.R.H.S., Yn Druin, Lezayre, Isle of Man; M. McA. H. Wallace, Dept. of Zoology, Downing Street, Cambridge; D. J. Wood, F.R.H.S., 4, Salisbury Road, Reading, Berks.

Thanks were voted to donors of gifts to the Library since the last meeting.

Mr. M. Armstrong, Mr. C. W. Coombs, Mr. S. M. Hanson, Mr. E. M. Marsden-Jones, Mr. T. E. Mittler, Mr. C. F. Rivers, Mr. A. A. Sandosham, Mr. M. McA. H. Wallace, Miss G. C. Williams and Mr. G. H. W. Wood signed the Obligation Book and were admitted Fellows of the Society.

The following papers, accepted for publication in the *Transactions* for 1950, were read in title:

"A catalogue of the Palaearctic *Euphydryas* (Lepidoptera: Rhopalocera)," by L. G. Higgins.

"The Identity of some Crambinae associated with sugar cane in India, and of certain species related to them (Lepidoptera: Pyralidae)," by A. P. Kapur.

"The New Zealand Psychodidae (Diptera), a study based on the collection and manuscript notes of the late A. L. Tonnoir," by G. H. Satchell.

"The morphology and function of the antennae of the Central European Genera of the family Hydrophylidae (Coleoptera)," by R. Hrbáček.

"The *Anopheles umbrosus* group. Part I, Systematics, with descriptions of two new species. Part 2, Biology and transmission of malaria," by J. A. Reid and E. P. Hodgkin.

"The seasonal distribution of *Culicoides impunctatus* Goetgebuer. (Diptera: Ceratopogonidae), with a discussion on the possibility that it may be composed of two or more biological races," by D. S. Kettle.

"A survey of the CHLOROCYPHIDAE (Odonata : Zygoptera)," by F. F. Laidlaw.

"Recent additions to the British Aphid fauna. Part 1, *Dactynotus* Rafinesque to *Rhopalosiphum* Koch," by H. L. G. Stroyan.

"A revision of the genus *Liposcelis*, with notes on the position of this genus in the order Corrodentia and on the variability of ten *Liposcelis* species," by E. Broadhead.

The following paper, accepted for publication in the *Transactions* when funds become available, was also read in title :

"Observations on the social wasps of South America," by O. W. and M. J. Richards.

The Secretary exhibited a parchment deed recently acquired from Mr. F. Evans, who had found it in a book shop in Clapham. The deed, dated May, 1806, and printed below without alteration, dissolved the then existing Aurelian Society and created the first Entomological Society of London, and set out in detail the rules and regulations of that Society. Mr. Riley read extracts from the deed, and pointed out that within a year of its execution the printed Bye-Laws of the Society, a copy of which had been obtained with the deed, showed that the clause concerning the Aurelian Cabinet, which appeared to have been the cause of much bitterness, had been deleted. The deed threw new light on several obscure phases of the history of the first Entomological Society of London, and would make it possible to correct certain erroneous statements which had been published in, amongst other places, the History of the Society.

'Whereas *in the year of our Lord* 1801, *"a small but very select circle 'of Entomological Amateurs" formed themselves into a Society, by the 'name of "The Aurelian Society," for the purposes of promoting the 'knowledge of British Insects ; and they agreed to give up to one Cabinet, 'under the name of "The Aurelian Cabinet, every Lepidopterous Insect 'from their respective collections, which that did not possess."*

'*And* Whereas *in the month of April in the year of our Lord* 1805, *'the said Gentlemen, and others who had joined them, and signed their 'Rules ; agreed unanimously, that the said Society should from that time, 'be called "The Entomological Society of London" ; and the said Cabinet 'be called "The Entomological Cabinet." And they further agreed to give 'up from time to time and at all times from their respective private collections, 'every British insect (whether Lepidopterous or not) capable of amending, 'or extending the Entomological Cabinet.*

'*And* Whereas *soon after the last meeting of the said Society in the 'month of April last, it was found expedient to dissolve the same, for the 'purpose of re-establishing it, on the more agreeable principles, and under 'the more satisfactory Rules and Regulations hereinafter detailed ; many 'of the former ones having been found incompatible with the true wellfare 'and intentions of the Society.*

'Wherefore, *we the undersigned have agreed, and do hereby severally 'and respectively agree, to adopt, support and abide by, the following Rules 'and Regulations, for the purpose of re-establishing the said Society ; and 'for continueing the same, and for the general advancement of the science 'of Entomology.*

'FIRST, *that the pursuits of this Society be directed towards the studying 'of all descriptions and kinds of Entomological subjects ; but more especially 'those of Great Britain ;—to ascertain their names and distinctions ;—*

*'their native countries ;—the particular times and places of their appear-
'ance ;—their food, oeconomy and peculiarities :—to point out to the public,
'the readiest and most desireable methods of destroying such as posses
'properties, which are inimical to the welfare of mankind :—and to make
'known, as far as possible, those properties, which may be useful in the
'furtherance of any other Science, or, in any way whatever, beneficial to
'Society.*

'SECOND, *that the meeting of the Society be held on the first Teusday in
'every month, at the hour of five o'Clock in the afternoon, at the house called
'the Black Horse, at the corner of Coventry Street, London ; untill otherwise
'agreed upon by a majority of the Members of the Society at any meeting.
'THIRD, that the Society shall at their first meeting, and afterwards annually,
'on the first Tuesday of May, chuse and elect from amongst themselves,
'by a vote of three fourths of the members present, a President, a Vice
'President, and a Treasurer, and a Secretary.*

'FOURTH, *that it shall be the office of the President to preside at the meetings,
'—to state all questions and motions made to the Society ; and to declare
'their result, whether in the negative, or the affirmative, and according to
'the true sense and intentions of the meetings ;—and that it shall also be
'his office to read to the Society in an audible manner, all papers or letters
'addressed to or laid before it :—to call for a statement of accounts from the
'Treasurer, or others, when requisite ;—to summons all extraordinary
'meetings :—to see to the due execution of the Society's Rules ; and to
'regulate all their proceedings ; and in cases of an equality of voting, to
'have a casting vote.*

'FIFTH, *that it shall be the office of the Vice-President to preside in like
'manner, in the absence of the President ; and that in the absence of both,
'it shall be lawful for the senior member present to preside.*

'SIXTH, *that it shall be the office of the Treasurer to demand, receive and
'pay all monies belonging to, or concerning the Society, whether owing to,
'or from the Society ; and to keep a true and legible account of the same ;
'which shall be audited and balanced by the Society, or by a Committee of
'it, appointed for the purpose, the first Teusday of May in every year.*

'SEVENTH, *that it shall be the office of the Secretary to attend all the meetings
'personally, or by deputy, (such deputy being a member) and safely keep all
'the papers and letters of the Society ; and also a minute book, in which he
'shall legibly and minutely insert all the Society's proceedings ; which
'minutes, or monthly portions thereof, he shall audibly read before the
'Society when requested by the President, or any member presiding in his
'absence so to do :—that it shall also be the office of the Secretary to superin-
'tend all printing matters belonging to the Society, and correct the press :—
'and that he shall if requested by the President, or any member presiding
'in his absence, draw up any letters which it may be deemed expedient to
'send to any person or persons on the Society's account.*

'EIGHTH, *that the Society's minute book, papers, and letters shall be open
'to the inspection of any member requesting the same of the Secretary, at
'reasonable times, but in his presence, and provided no extract is made
'from them, without a vote of the majority of the members at any meeting
'should authorize the same.*

'NINTH, *that every person desirous of becoming a member of this Society
'shall be recommended at a monthly meeting, by two or more members in
'writing, nearly after the following manner, viz. "We whose names are here-*

'unto subscribed, do hereby recommend Mr."——of——as a willing and 'proper person to become a member of" The Entomological Society knowing 'him to be a favourer of the science of Entomology—Witness our names '&c.",—and that at the next meeting after any one is so recommended, his 'election or rejection, shall be determined by ballot: and if three fourths 'of the members present at such meeting shall ballot in his favour he shall 'be considered as duly elected, and be enrolled accordingly but not otherwise.

'TENTH, *that every person on being elected a member, shall have immediate 'notice in writing given him of his election, by the Secretary, and such 'member shall appear personally for admission before the Society, the first 'meeting convenient to him afterwards; and be liable to the fine for non-'attendance hereinafter mentioned.*

'ELEVENTH, *that all the members of the late Society, the dissolution of 'which is hereby declared, shall be admitted without ballot of the present 'Society, if they think proper.*

'TWELFTH, *that every member previous to his being enrolled, shall sign 'the Society's rules, pay a years subscription in advance, and be formally 'announced to the Society, by the President's taking hold of his hand and 'saying "Mr"——, in the name, and by the authority of the Entomological 'Society of London, I hereby admit you, as a duly elected member thereof."*

'THIRTEENTH, *that every member shall pay into the hands of the Treasurer 'the sum of ten shillings annually, towards raising a fund for and defraying 'the necessary expenses of the Society;—such subscription to be paid one 'year in advance, and to be due the first Teusday in May in every year.*

'FOURTEENTH, *that all the members shall attend the meetings as often as 'they can make it convenient,—and they are hereby invited to present to 'the Society, any papers or essays on—Entomological subjects they may 'think proper; the same to be published hereafter under the title of the 'Society's Transactions; if a majority of the three fourth's of the members 'present, or by proxy at any meeting shall deem it, expedient; provided 'the expences attending publication do not exceed the Society's fund.*

'FIFTEENTH, *that every member shall have a copy gratis, of every thing 'published by the Society, after he becomes a member of it, and that the 'remaining copies shall be sold for the benefit of the Societies fund.*

'SIXTEENTH, *that the funds of the Society or any part thereof, be at the 'disposal only of a majority of three fourths of the members present or by 'proxy at any meeting.*

'SEVENTEENTH, *that every member resident within 5 miles of London, 'shall in case of nonattendance at any meeting pay a fine of one shilling 'to the Society's fund;—but this rule not to attach on members resident 'at a greater distance.*

'EIGHTEENTH, *that all members be invited to produce to the Society at its 'meeting's, but as far only as they can make it agreeable and convenient; 'any Insects they may have recently captured, or any others whether British 'or exotic, they may think proper; together with any list or information 'concerning the same they may chuse to communicate; by which proceedings 'it is reasonably presumed, gradual and useful knowledge will accrue to 'the Society respecting the times and places of appearance, with other 'peculiarities, of many interesting Insects. And it is likewise presumed that 'such a monthly exhibition of Entomological matter, will exceedingly 'facilitate a mutual and desireable exchange of rare specimens amongst the 'members, to the benefit and extension of their respective collections.*

'NINETEENTH, *that the Society shall apply, as far as practicable, suitable 'latin & english appellations to such unnamed Insects as may be laid 'before it; the said names to be proposed by any member, & carried or 'rejected by a majority of the members present; & if carried, the same 'shall be entered in the minute book by the Secretary, & used by the members 'as long afterwards as they shall think good.*

'TWENTIETH, *that the Entomological Cabinet, which is the property of 'Mr. Haworth of Little Chelsea, near London, and the best collection of 'British Insects at present known, shall be at the free use of such of the 'members of the Society, as have contributed, or shall hereafter contribute 'rare Insects wanting to the same; he the said Mr. Haworth hereby agreeing 'that such contributors shall at all reasonable times, have full liberty & 'permission to inspect the same in his presence, so long as it shall be his; 'either for the purposes of amusement & pleasure; or, for those of infor- 'mation concerning the arrangement, distribution, or nomenclature of 'Entomological subjects.*

'TWENTY-FIRST, *that every member refusing compliance with the above 'Rules, shall be liable, after reasonable remonstrance, to expulsion from 'The Society, by a majority of three fourths of the members at any meeting, 'provided notice be given by any member one meeting previous to the 'expulsion's taking place.*

'TWENTY-SECOND, *that any member desirous of resigning, shall signify 'his intention of so doing, to the Society either personally or by letter, '& on paying up any arrears he may have incurred towards the Society's 'Fund, shall cease to be a member.*

'TWENTY-THIRD, *that it shall be lawful for three fourths of the members 'present, or by proxy, at any meeting to add such other Rules & regulations 'to the above, as may be found expedient, for the welfare & advantage of 'their Institution. Witness our hands this first day of May, in the year 'of our Lord* 1806.'

The signatories of the deed were the following:

'A. H. Haworth, F.L.S., Little Chelsea, near London.
'John Burrell A.M., F.L.S., Letheringsett, Norfolk.
'Thos. Skrimshire, Clk., LL.B., Fakenham, Norfolk.
'Robt. Scales, No. 11, *Richmond Place, Walworth.*
'F. G. Ingall, 16, *Queens Row, Walworth, Surrey.*
'J. Hatchett of Kingsland Road Middx, F.L.S.
'John Howard of Kingsland Green, Middx.
'F. Hooker Junr., Norwich.
'Richd. Cuming, No. 3. *Dean's Row, Walworth.*
'Mo. Surr, 56 *St. Pauls Church Yard, London.*
'James Savage, No. 8. *Old Jewry.*
'John Pittard, 8 *Church Street, Spitalfield.*
'J. P. Neale, 19 *Bennett Street, Surrey Road.*
'Willm. Savage, 28 *Bedford Bury.*
'Ibbetson Fenton, 9, *Apollo Buildings, Walworth.*
'Matthew Easingwood, 21, *Albemarle Street.*
'Phillip Abraham, Gent; Post Office.'

Dr. C. B. Williams exhibited two drawers containing a selection from nearly 400 butterflies sent by Dr. G. Addison from Para, Brazil. The insects formed part of a huge migration moving towards the west between June and September,

1949. The migration consisted mostly of six species of *Catopsilia*, and of these 90 per cent. were *C. statira*. He said that at the end of last century Goeldi recorded a migration in the same locality in the same direction, and at the same time of year. Three or four of the species mentioned by him were also the dominant species in the present migration.

Mr. Miles Williams (a visitor) exhibited a moth new to Britain, now identified as *Utetheisa bella*, which was captured at Skokholm Island, Pembrokeshire, in July, 1948. He recalled that in December, 1948, he had exhibited this insect as *U. pulchella*. This identification having been queried, it was re-identified as *U. ornatrix*, but had been finally determined by Dr. Jordan as *U. bella*, a native of the eastern N. America, the West Indies and Central America.

Dr. J. S. Kennedy made a communication on host specificity in Aphids, an abstract of which appeared on page 16. In the discussion which followed Dr. Jones said that Dr. Kennedy's observations explained the astonishing variation in the extent of the infection of spindle trees in autumn by which he himself had often been struck.

Dr. Kennedy said, in reply to an enquiry by Dr. Williams, that a new growth of foliage appearing on a tree after damage was especially attractive to the aphids.

Dr. Hobby asked whether the aphids always ate leaves containing amino-acids essential to their diet. According to the translocation theory there would not be a concentration of essential aminoacids at the young growing point. Dr. Kennedy held the view that the aphids were more discerning than the advocates of the translocation theory.

In reply to an inquiry by Professor Champion as to the primary host of spindle aphis, Dr. Jones felt he could not say with certainty ; he thought it was possibly herbaceous, but further north it undoubtedly had a woody host, so that the host was dependent on the climate and location factor.

The President gave an account, illustrated by lantern-slides, of a method of injecting the tracheae and tracheoles of insects. In answer to inquiries on the difficulties encountered in his method, Dr. Wigglesworth said that fluid did not penetrate the gut except in the rare cases when it was swallowed. As the spiracles were open to the exterior the evacuation of air from the tracheae did not give rise to distortion, except that occasionally the crop of a newly moulted insect might be distorted.

Mr. E. M. Marsden-Jones read a paper on the life-cycle of *Adleria kollari* Hartig, an abstract of which appeared on page 16.

In the discussion which followed Mr. R. B. Benson congratulated Mr. Marsden-Jones on confirming beyond any doubt that *Adleria kollari* (Hartig, 1843) was the agamic form of *Andricus circulans* Mayr, 1870. He pointed out that the species should henceforward by priority be known as *Andricus kollari* (Hartig), and that, since *kollari* was the type species of *Adleria*, the genus *Adleria* sank under *Andricus*. He also remarked that, if it should later be found that alternating host species were a feature of the whole group of species formerly included in the genus *Adleria*, it would appear that the group was a natural biological unit and its generic status would have to be reconsidered.

Mr. R. B. Freeman reported having seen marble galls in Barra, and Dr. Richards said that Mr. Heslop Harrison had recorded them from the Outer Hebrides, where no *Quercus cerris* was known to grow. Mr. Marsden-Jones had little doubt that the insect was wind-borne over considerable distances.

N. D. RILEY, *Honorary Secretary.*

The next meeting will be held on 5th July, at 5.30 p.m.

PRINTED BY ADLARD AND SON, LIMITED, BARTHOLOMEW PRESS, DORKING.